



Cisco Aironet 1560 Series Outdoor Access Points

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Cisco Aironet® 1560 Series Outdoor Access Points offer the latest 802.11ac Wave 2 functions in a rugged, low-profile housing that service providers and enterprises can deploy easily.



Ideal for applications requiring rugged outdoor Wi-Fi coverage, the Cisco Aironet 1560 Series Access Points offer the latest IEEE 802.11ac Wave 2 radio standard in a compact, aesthetically pleasing, easy-to-deploy package. The 1560 Series offers flexible deployment options for service providers and enterprise networks, that need the fastest links possible for mobile, outdoor clients (smartphones, tablets, and laptops) and wireless backhaul. With options for internal or external antennas, the 1560 Series Access Points give network operators the flexibility to balance their desired wireless coverage with their need for easy deployment. The Cisco Aironet 1560 Series is built on the strong base of Cisco® wireless innovations such as:

- Cisco CleanAir® technology for spectrum intelligence
- Cisco ClientLink technology for beamforming
- Radio Resource Management (RRM) for dynamic transmitter channel and power control

Whether deployed as a traditional access point or wireless mesh access point, the Cisco Aironet 1560 Series provides the throughput capacity needed for today's bandwidth-hungry devices.

Features and benefits

Table 1 lists the features and benefits of the Cisco Aironet 1560 Series.

Table 1. Features and Benefits of Cisco Aironet 1560 Series

Feature	Benefit
802.11ac Wave 2 radio	Provides up to 1.3-Gbps data rates with 3×3 Multiple Input, Multiple Output (MIMO) and up to three spatial streams
Multiuser MIMO (MU-MIMO)	Allows transmission of data to multiple 802.11ac Wave 2-capable clients simultaneously to improve client experience; prior to 802.11ac Wave 2, access points could transmit data to only one client at a time, typically referred to as single-user MIMO

Feature	Benefit
Flexible deployment modes	Allows for deployment of the 1560 in a variety of ways including point -to-point and mesh networks; it can also be deployed with the Cisco Mobility Express Solution, which is ideal f or small to medium -sized deployments that supports multiple access points without a physical controller; all deployment modes are easy to set up and configure
Small Form-Factor Pluggable (SFP) port	Supports optical fiber-based network connectivity for remote locations

Prominent feature/differentiator/capability

The Cisco Aironet 1560 Series offers the following features:

- Improved performance for multiple client devices: The 802.11ac Wave 2 access points use MU-MIMO technology, which allows different data streams to all flow at once from the access point to multiple 802.11ac Wave 2-supported devices. Now, multiple 802.11ac Wave 2 devices can connect at the same time, getting the information they need quicker.
- 5-GHz support: The Cisco Aironet 1560 Series doubles the scale of 5 -GHz mobile devices and raises the performance of high-density environments.
- 4G LTE Coexistence: The Cisco Aironet 1560 Series includes robust filtering around the 2.4 GHz unlicensed band to block out nearby licensed 4G LTE cellular signals.
- Cisco Flexible Antenna Port technology uses software configurable for either single- or dual-band antennas. It allows you to use the same antenna ports for either dual-band antennas to reduce footprint or single-band antennas to optimize radio coverage.
- Cisco Mobility Express: This solution is designed to bring enterprise-class wireless access to small and medium-sized networks. Easy to set up with low maintenance, Mobility Express includes advanced features from Cisco and does not require a physical controller appliance.
- Cisco High Density Experience (HDX): Cisco HDX comes standard on the 1560, giving this access point top-of-the-line network efficiency over a large number of wireless clients. HDX uses customized chipsets to target the needs of high-density networks. It is built with best-in-class RF architecture and gives a better user experience for high-performance applications.

Product specifications

Table 2 lists the specifications of the 1560 access point.

 Table 2.
 Specifications of Cisco Aironet 1560 Series

Item	Specification	on				
802.11ac Wave 1 and 2 capabilities	 1562l: 3 x 3 MIMO with three spatial streams 1562E/D 2 x 2 MIMO with two spatial streams Multi- and single-user MIMO Maximal Ratio Combining (MRC) 802.11ac beamforming (transmit beamforming) 20-, 40-, and 80-MHz channels PHY data rates up to 1.3 Gbps (80 MHz in 5 GHz) Packet aggregation: A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx) 802.11 Dynamic Frequency Selection (DFS) Cyclic-Shift-Diversity (CSD) support 					
802.11n (and related) capabilities	 1562I: 3 x 3 MIMO with three spatial streams 1562E/D: 2 x 2 MIMO with two spatial streams MRC 20- and 40-MHz channels PHY data rates up to 450 Mbps Packet aggregation: A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx) 802.11 DFS CSD support 					
Data rates supported	802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps 802.11n data rates on 2.4 and 5 GHz:					
	MCS Index	GI4 = 800 ns		GI = 400 ns		
		20-MHz Rates (Mbps)	40-MHz Rates (Mbps)	20-MHz Rates (Mbps)	40-MHz Rates (Mbps)	
	0	6.5	13.5	7.2	15	
	1	13	27	14.4	30	
	2	19.5	40.5	21.7	45	
	3	26	54	28.9	60	
	4	39	81	43.3	90	
	5	52	108	57.8	120	
	6	58.5	121.5	65	135	
	7	65	135	72.2	150	
	8	13	27	14.4	30	
	9	26	54	28.9	60	

Item	Specificati	ation							
	10	39		81		43.3		90	
	11	52		108 57.8		57.8	120		
	12	78		162 86.7		86.7	ô.7		
	13	104		216		115.6		240	
	14	117		243		130		270	
	15	130		270		144.4		300	
	16	19.5		40.5		21.7		45	
	17	39		81		43.3		90	
	18	58.5		121.5		65		135	
	19	78		162		86.7		180	
	20	117		243		130		270	
	21	156		324		173.3		360	
	22	175.5		364.5		195		405	
	23	195	40)5	216.7			450	
	802.11ac [Data Rates (5 GHz)						
	Spatial Streams	MCS	GI = 800	00 ns		G	GI = 400 ns		
			20 MHz	40 MHz	80 MI	-Iz 2	0 MHz	40 MHz	80 MHz
	1	0	6.5	13.5	29.3	7	.2	15	32.5
	1	1	13	27	58.5	1	4.4	30	65
	1	2	19.5	40.5	87.8	2	1.7	45	97.5
	1	3	26	54	117	2	8.9	60	130
	1	4	39	81	175.5	5 4	3.3	90	195
	1	5	52	108	234	5	7.8	120	260
	1	6	58.5	121.5	263.3	3 6	5	135	292.5
	1	7	65	135	292.5	5 7	2.2	150	325
	1	8	78	162	351	8	6.7	180	390
	1	9	_	180	390	-		200	433.3
	2	0	13	27	58.5	1	4.4	30	65
	2	1	26	54	117	2	8.9	60	130
	2	2	39	81	175.5	5 4	3.3	90	195
	2	3	52	108	234	5	7.8	120	260
	2	4	78	162	351	8	6.7	180	390
	2	5	104	216	468	1	15.6	240	520

	Specification	on						
	2	6	117	243	526.5	130	270	585
	2	7	130	270	585	144.4	300	650
	2	8	156	324	702	173.3	360	780
	2	9	-	360	780	_	400	866.7
	3	0	19.5	40.5	87.8	21.7	45	97.5
	3	1	39	81	175.5	43.3	90	195
	3	2	58.5	121.5	263.3	65	135	292.5
	3	3	78	162	351	86.7	180	390
	3	4	117	243	526.5	130	270	585
	3	5	156	324	702	173.3	360	780
	3	6	175.5	364.5	-	195	405	_
	3	7	195	405	877.5	216.7	450	975
	3	8	234	486	1053	260	540	1170
	3	9	260	540	1170	288.9	600	1300
(regulatory domains)	5.660 to 5.7 5.745 to 5.8 B: 2.412 to 2.4 5.180 to 5.2	680 GHz, 5 ch 700 GHz, 3 ch 625 GHz, 5 ch 62 GHz, 11 c 640 GHz, 4 ch 620 GHz, 4 ch	annels annels hannels annels					

Item	Specification
	G:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.825 GHz, 5 channels
	-Н:
	2.412 to 2.472 GHz, 13 channels
	5.745 to 5.825 GHz, 5 channels
	-I:
	2.412 to 2.472 GHz, 13 channels
	5.180 to 5.320 GHz, 8 channels (Supported countries - *Egypt)
	-K:
	2.412 to 2.462 GHz, 11 channels
	5.280 to 5.320 GHz, 3 channels
	5.500 to 5.620 GHz, 7 channels
	5.745 to 5.805 GHz, 4 channels
	-L:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.620 GHz, 7 channels
	5.745 to 5.865 GHz, 7 channels
	-M:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.805 GHz, 4 channels
	-N:
	2.412 to 2.462 GHz, 11 channels
	5.745 to 5.825 GHz, 5 channels
	-Q:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.700 GHz, 11 channels
	-R:
	2.412 to 2.472 GHz, 13 channels
	5.260 to 5.320 GHz, 4 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.825 GHz, 5 channels
	-S:
	2.412 to 2.472 GHz, 13 channels
	5.500 to 5.700 GHz, 11 channels
	5.745 to 5.825 GHz, 5 channels
	-T:
	2.412 to 2.462 GHz, 11 channels
	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels

Item	Specification
	5.745 to 5.825 GHz, 5 channels
	-Z:
	2.412 to 2.462 GHz, 11 channels
	5.500 to 5.580 GHz, 5 channels
	5.660 to 5.700 GHz, 3 channels
	5.745 to 5.825 GHz, 5 channels

Note: Customers are responsible f or verifying approval f or use in their individual countries. To verify approval that corresponds t o a particular country, please visit https://www.cisco.com/go/aironet/compliance.

Maximum	2.4 GHz	5 GHz
number of	• 802.11b/g:	• 802.11a:
nonoverlapping channels	• 20 MHz: 3	• 20 MHz: 27
	• 802.11n:	• 802.11n:
	• 20 MHz: 3	• 20 MHz: 27
	• 40 MHz: 1 (hardware capable)	• 40 MHz: 13
		• 802.11ac:
		• 20 MHz: 27
		• 40 MHz: 13
		• 80 MHz: 6

Note: This number varies by regulatory domain. Refer to the product documentation f or specific details f or each regulatory domain.

Receive Sensitivity							
			2.4 GHz Radio			5 GHz Radio)
	Spatial Stre	ams	1562I	1562D/E		15621	1562D/E
802.11/11b							
1 Mbps	1	-100		-98	NA		NA
11 Mbps	1	-88		-87	NA		NA
802.11a/g							
6 Mbps	1	-92		-90	-94		-93
24 Mbps	1	-86		-83	-89		-88
54 Mbps	1	-76		-74	-80		-79
802.11n HT20							
MCS0	1	-90		-89	-91		-90
MCS4	1	-84		-82	-88		-86
MCS7	1	-77		-75	-80		-78
MCS8	2	-89		-88	-90		-89

Item	Specification	on			
MCS12	2	-82	-80	-85	-83
MCS15	2	-75	-72	-78	-76
MCS16	3	-89		-90	
MCS20	3	-81		-84	
MCS23	3	-73		-76	
802.11n HT40					
MCS0	1	-88	-86	-90	-90
MCS4	1	-82	-80	-85	-83
MCS7	1	-75	-74	-78	-76
MCS8	2	-87	-86	-90	-90
MCS12	2	-80	-78	-82	-81
MCS15	2	-72	-70	-75	-73
MCS16	3	-87		-90	
MCS20	3	-78		-81	
MCS23	3	-71		-74	
802.11ac VHT20					
MCS0	1			-95	-94
MCS4	1			-88	-86
MCS7	1			-81	-79
MCS8	1			-77	-75
MCS0	2			-94	-93
MCS4	2			-86	-84
MCS7	2			-78	-76
MCS8	2			-74	-72
MCS0	3			-93	
MCS4	3			-85	

Item	Specification	n		
MCS7	3		-78	
MCS8	3		-72	
MCS9	3		-69	
802.11ac VHT40				
MCS0	1		-91	-90
MCS4	1		-85	-84
MCS7	1		-79	-77
MCS8	1		-75	-73
MCS9	1		-73	-71
MCS0	2		-91	-90
MCS4	2		-83	-82
MCS7	2		-76	-74
MCS8	2		-73	-70
MCS9	2		-71	-68
MCS0	3		-91	
MCS4	3		-82	
MCS7	3		-74	
MCS8	3		-69	
MCS9	3		-68	
802.11ac VHT80				
MCS0	1		-88	-88
MCS4	1		-83	-81
MCS7	1		-75	-73
MCS8	1		-71	-69
MCS9	1		-69	-67
MCS0	2		-88	-88
MCS4	2		-80	-78

Item	Specification	n			
MCS7	2			-73	-71
MCS8	2			-69	-67
MCS9	2			-67	-65
MCS0	3			-88	
MCS4	3			-78	
MCS7	3			-71	
MCS8	3			-67	
MCS9	3			-65	
Maximum conducted transmit power	1562I2.4 GHz: 29 dBm with 3 antennas5 GHz: 29 dBm with 3 antennas		1562D2.4 GHz: 27 dBm with 2 antennas5 GHz: 27 dBm with 2 antennas		1562E2.4 GHz: 27 dBm with 2 antennas5 GHz: 27 dBm with 2 antennas

Note: The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation f or specific details.

Interfaces	 WAN port 10/100/1000BASE-T Ethernet, autosensing (RJ-45), PoE in SFP port (fiber or electrical) Management console port (RJ-45) Multicolor LED DC power input Reset button 		
Uplink options	Ethernet, SFP, and wireless mesh		
Dimensions (L x W x D)	1562I: 9.0 x 6.8 x 3.9 in. (22.9 x 17.1 x 9.8 cm) 1562D: 9.0 x 6.8 x 4.3 in. (22.9 x 17.1 x 10.9 cm) 1562E:: 9.0 x 6.8 x 3.9 in. (22.9 x 17.1 x 9.8 cm)		
Weight	1562l: 5.6 lb (2.5 kg) 1562D: 5.7 lb (2.6 kg) 1562E: 5.6 lb (2.5 kg)		
Environmental	Operating temperature: • -40 to 65°C (-40 to 149°F) ambient air with no solar loading • -40 to 55°C (-40 to 131°F) ambient air with solar loading Storage temperature: -40 to 85°C (-40 to 185°F) Humidity: 5 - 95%, non-condensing Wind resistance: • Up to 100-mph sustained winds • Up to 165-mph wind gusts		

Item	Specification				
Environmental ratings	 IEC 60529 IP67 NEMA Type 4X Icing protection NEMA 250-2008 Corrosion NEMA 250-2008 (600 hours) Solar radiation EN 60068-2-5 (1200 W/ m2) Vibration MIL-STD-810 				
Antennas	 Integrated dual-band Dual Band AIR-ANT2568VG-N AIR-ANT2547VG-N AIR-ANT2547V-N AIR-ANT2513P4M Single Band 2.4 GHz AIR-ANT2450VG-N AIR-ANT2450VG-N AIR-ANT2450VG-N AIR-ANT2450VG-N AIR-ANT2413P2M 5 GHz AIR-ANT5150VG-N AIR-ANT5150VG-N AIR-ANT5150VG-N AIR-ANT5114P2M 	directional antenna radome, A 6 dBi (2.4 GHz), A dBi (2.4 GHz), A dBi (2.4 GHz), B dBi (2.4 GHz), A dBi (2.4 GHz), B dBi (5GHz),	(1562D) 9 dBi (2.4 C 8 dBi (5 GHz) 7 dBi (5 GHz) 7 dBi (5 GHz) 8 dBi (5 GHz) 13 dBi (5 GHz) Omni Omni, vertical po Omni, horizontal Omni Directional, dual Omni, vertical po Omni, horizontal	Omni Omni Omni Directional Directional Diarized polarized polarized polarized polarized	
Powering options	 AC (with AIR-PWRADPT-RGD1=, AC/DC outdoor power adapter) 44-57 VDC input Universal Power of Ethernet (Cisco UPoE+ and Cisco UPoE), 802.3at Cisco power injectors: AIR-PWRINJ-60RGD1= (outdoor rated, 60W, with NEMA 5-15 AC plug) AIR-PWRINJ-60RGD2= (outdoor rated, 60W, unterminated AC cable) AIR-PWRINJ6= (indoor, 802.3at) Note: If 802.3at Power over Ethernet (PoE) is the source of power, the 1562I radios will shift from 3 x 3 to 2 x 2. 				
Power consumption	1562I 32 W (3x 1562D/E 25 W	x3:3, full power)			

Item	Specification
Compliance	Safety UL60950, 2nd Edition CAN/CSA-C22.2 No. 60950, 2nd Edition IEC 60950, 2nd Edition EN 60950, 2nd Edition Immunity <= 5 mJ for 6kV/3kA @ 8/20 ms waveform ANSI/IEEE C62.41 EN61000-4-5 Lev el 4 AC Surge Immunity EN61000-4-4 Lev el 4 Electrical Fast Transient Burst Immunity
	 EN61000-4-3 Lev el 4 EMC Field Immunity EN61000-4-2 Lev el 2 ESD Immunity EN60950 Overvoltage Category IV
	Radio Approvals FCC Part 15.247, 15.407 FCC Bulletin OET-65C RSS-247 RSS-102 AS/NZS 4268.2003 ARIB-STD 66 (Japan) ARIB-STD T71 (Japan) EN 300 328 EN 301 893
	EMI and Susceptibility • FCC part 15.107, 15.109 • ICES-003
	 EN 301 489-1, -17 Security Wireless bridging/mesh (future availability) X.509 digital certificates MAC address authentication Advanced Encryption Standard (AES)
	 Wireless Access 802.11i, Wi-Fi Protected Access 2 (WPA2), and WPA 802.1X authentication, including Extensible Authentication Protocol (EAP) and Protected EAP (EAP-PEAP), EAP Transport Layer Security (EAP-TLS), EAP-Tunneled TLS (EAP-TTLS), EAP-Subscriber Identity Module - (EAP-SIM), and Cisco LEAP VPN pass-through IP Security (IPsec) Layer 2 Tunneling Protocol (L2TP) MAC address filtering
Warranty	1-year limited hardware warranty

Ordering Information

Table 3 gives ordering information for the Cisco Aironet 1560 Series.

Table 3. Ordering Information for Cisco Aironet 1560 Series

Part Number	Product Description			
Aironet 1560 Series	 AIR-AP1562I-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, internal semi-omni antennas AIR-AP1562E-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, external antennas AIR-AP1562D-x-K9: Dual-band 802.11a/g/n/ac, Wave 2, internal directional antennas 			
	Regulatory domains: (x = regulatory domain)			
	Customers are responsible f or verifying approval f or use in their individual countries. To verify approval that corresponds to a particular country or the regulatory domain used in a specific country, visit https://www.cisco.com/go/aironet/compliance .			
	Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List. • AIR-AP1562I-D-K9I: Dual-band 802.11a/g/n/ac, Wave 2, internal antennas (India only)			
	Cisco SMARTnet [™] Service for the Cisco Aironet 1560 Series Access Points			
	Refer to the Service part numbers available on Cisco Commerce Workspace f or available service offerings.			

Warranty information

The Cisco Aironet 1560 Series Outdoor Access Points come with a 1 -year limited warranty that provides full warranty coverage of the hardware. The warranty includes 10 -day advance hardware replacement and helps ensure that software media are defect-free for 90 days. For more details, visit https://www.cisco.com/go/warranty.

Cisco and partner services

Realize the full business value of your technology investments faster with intelligent, customized services from Cisco and our partners. Backed by deep networking expertise and a broad ecosystem of partners, Cisco Wireless LAN Services help you deploy a sound, scalable mobility network that enables rich -media collaboration while improving the operational efficiency gained from a converged wired and wireless network infrastructure based on the Cisco Unified Wireless Network.

Together with partners, we offer expert plan, build, and run services to accelerate your transition to advanced mobility services while continuously optimizing the performance, reliability, and security of that architecture after it is deployed. For more details, please visit: https://www.cisco.com/c/en/us/products/wireless/service-listing.html.

Cisco Capital

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Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. <u>Learn more</u>.

For more information

For more information about the Cisco Aironet 1560 Series, visit https://www.cisco.com/go/wireless or contact your local Cisco account representative.

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